

# *Project Baseline Summary Report*

Data Source: **EM CDB**

Operations/Field Office: **Headquarters Tech Support**

Site Summary Level: **Headquarters Technical Support**

Project **HQ-WM001 / Complex-Wide Waste Management Support and Analyses**

Report Number: **GEN-01b**

Print Date: **3/9/2000**

HQ ID: **0557**

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## **General Project Information**

### **Project Description Narratives**

#### **Purpose, Scope, and Technical Approach:**

The mission of the Waste Management Program is to protect people and the environment from the hazards of the DOE radioactive and hazardous waste by providing an effective and efficient system that minimizes, stores, and treats the waste and disposes most of the waste as soon as possible. The purpose of this project is to provide technical support for waste management activities and decisions that impact the entire DOE complex. Support is provided for interactions with the Environmental Protection Agency, the Nuclear Regulatory Commission, and the Defense Nuclear Facilities Safety Board on waste management issues; implementation of the DOE requirements for managing radioactive waste; and technical analyses to evaluate complex-wide integration opportunities and reduce outyear costs. The technical approach followed is to integrate complex-wide analyses with waste management activities in the field to ensure that work is done in the most cost-effective manner possible.

#### **Project Status in FY 2006:**

Significant waste management operations will be ongoing in FY 2006, including high-level radioactive waste vitrification at Savannah River and Hanford, high-level radioactive waste and sodium-bearing waste processing at Idaho, transuranic waste disposal at the Waste Isolation Pilot Plant, mixed-waste treatment at Idaho, and low-level waste and mixed low-level waste disposal at facilities to be identified in the upcoming Programmatic Environmental Impact Statement Records of Decision.

#### **Post-2006 Project Scope:**

Processing of high-level radioactive waste for disposal will continue beyond 2006 at Savannah River, Hanford, and Idaho for several decades. Similarly, processing of transuranic waste at several DOE sites for disposal at the Waste Isolation Pilot Plant will also continue for several decades. Low-level waste and mixed low-level waste inventories will be disposed as generated.

#### **Project End State**

Complete treatment and safe disposal of all DOE waste including the legacy of waste from the nuclear weapons program. With disposal of the legacy waste, the DOE waste management system will be downsized and in a steady state when most waste generators are treating and disposing of waste as generated. Long-term surveillance and monitoring will continue.

#### **Cost Baseline Comments:**

The waste management program activities will continue for decades beyond the year 2006, particularly for high-level and transuranic waste. For example, high-level waste processing at Savannah River, Hanford, and Idaho is not scheduled to be completed before the years 2024, 2028, and 2035, respectively. Cleanup of high-level waste processing facilities at the West Valley Demonstration Plant is not scheduled to be completed before 2023, and transuranic waste disposal operations at the Waste Isolation Pilot Plant are scheduled to continue to 2034. Such extended periods for completing major elements of the waste management program make it difficult to estimate precisely the life-cycle costs for this PBS. Nevertheless, a life-cycle cost estimate has been developed based on the considerations that (1) it is essential to continue relatively stable funding to address technical issues that will arise over the coming years, and (2) the number and complexity of the technical issues that will arise will ultimately diminish with time. The specific funding assumptions that underlie the life-cycle cost estimate are that (1) the funding level in current year dollars will remain unchanged

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Dataset Name: **FY 1999 Planning Data**

Date of Dataset: **9/20/1999**

Page 1 of 5

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through FY 2025, i.e., the decreasing purchasing power due to inflation will be absorbed; (2) the funding level will decrease by \$100K each year during the FY 2026-FY 2040 period; and (3) the funding level will remain unchanged at \$1,000K during the FY 2041-FY 2070 period, i.e., the decreasing purchasing power due to inflation will be absorbed. This cost estimate is also based on the assumption that the annual inflation rate will not exceed 2.1%. No contingency is included. These assumptions, which provide the basis for the life-cycle cost estimate of this PBS, recognize the decades-long work that remains for safe disposal of radioactive waste while reflecting the progress that will ultimately be made.

### Safety & Health Hazards:

This project addresses complex-wide issues related to the storage, treatment, and disposal of high-level, transuranic, low-level, and mixed low-level waste. Responsible management of this waste is essential to the protection of the health and safety of workers, the public, and the environment.

### Safety & Health Work Performance:

Work performance will be subject to the management controls implemented within the Office of Environmental Management. Significant decisions impacting the health and safety of workers, the public, and the environment will be reserved to the Deputy Assistant Secretary for Waste Management and the Assistant Secretary for Environmental Management.

### PBS Comments:

### Baseline Validation Narrative:

## General PBS Information

Project Validated?

Date Validated:

Has Headquarters reviewed and approved project?

No

Date Project was Added: 12/1/1997

Baseline Submission Date: 7/8/1999

FEDPLAN Project? Yes

Drivers:	CERCLA	RCRA	DNFSB	AEA	UMTRCA	State	DOE Orders	Other
	N	Y	Y	Y	N	Y	Y	Y

## Project Identification Information

DOE Project Manager: Richard J. Blaney

DOE Project Manager Phone Number: 301-903-7147

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## General PBS Information

**DOE Project Manager Fax Number:** 301-903-5777  
**DOE Project Manager e-mail address:** dick.blaney@em.doe.gov  
**Is this a High Visibility Project (Y/N):**

## Planning Section

### Baseline Costs (in thousands of dollars)

	1997-2006 Total	2007-2070 Total	1997-2070 Total	1997	Actual 1997	1998	Actual 1998	1999	2000	2001	2002	2003	2004	2005	2006	
PBS Baseline (current year dollars)	39,995	106,740	146,735	4,271	4,271	14,726	14,726	2,728	2,610	2,610	2,610	2,610	2,610	2,610	2,610	
PBS Baseline (constant 1999 dollars)	38,552	58,181	96,733	4,271	4,271	14,726	14,726	2,728	2,556	2,504	2,452	2,402	2,352	2,304	2,257	
PBS EM Baseline (current year dollars)	39,995	106,740	146,735	4,271	4,271	14,726	14,726	2,728	2,610	2,610	2,610	2,610	2,610	2,610	2,610	
PBS EM Baseline (constant 1999 dollars)	38,552	58,181	96,733	4,271	4,271	14,726	14,726	2,728	2,556	2,504	2,452	2,402	2,352	2,304	2,257	
	2007	2008	2009	2010	2011-2015	2016-2020	2021-2025	2026-2030	2031-2035	2036-2040	2041-2045	2046-2050	2051-2055	2056-2060	2061-2065	2066-2070
PBS Baseline (current year dollars)	2,610	2,610	2,610	2,610	13,050	13,050	13,050	11,550	9,050	6,550	5,000	5,000	5,000	5,000	5,000	5,000
PBS Baseline (constant 1999 dollars)	2,210	2,165	2,120	2,077	9,760	8,796	7,927	6,324	4,468	2,913	2,005	1,807	1,628	1,467	1,323	1,191
PBS EM Baseline (current year dollars)	2,610	2,610	2,610	2,610	13,050	13,050	13,050	11,550	9,050	6,550	5,000	5,000	5,000	5,000	5,000	5,000

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	2007	2008	2009	2010	2011- 2015	2016- 2020	2021- 2025	2026- 2030	2031- 2035	2036- 2040	2041- 2045	2046- 2050	2051- 2055	2056- 2060	2061- 2065	2066- 2070
PBS EM Baseline (constant 1999 dollars)	2,210	2,165	2,120	2,077	9,760	8,796	7,927	6,324	4,468	2,913	2,005	1,807	1,628	1,467	1,323	1,191

## Baseline Escalation Rates

1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
0.00%	0.00%	0.00%	2.10%	2.10%	2.10%	2.10%	2.10%	2.10%	2.10%	2.10%	2.10%	2.10%
2010	2011-2015	2016-2020	2021-2025	2026-2030	2031-2035	2036-2040	2041-2045	2046-2050	2051-2055	2056-2060	2061-2065	2066-2070
2.10%	2.10%	2.10%	2.10%	2.10%	2.10%	2.10%	2.10%	2.10%	2.10%	2.10%	2.10%	2.10%

## Project Reconciliation

### Project Completion Date Changes:

Previously Projected End Date of Project:

Current Projected End Date of Project: 9/30/2070

Explanation of Project Completion Date Difference (if applicable):

### Project Cost Estimates (in thousands of dollars)

Previously Estimated Lifecycle Cost (1997 - 2070, 1998 Dollars):	0	Actual 1997 Cost:	4,271	Actual 1998 Cost:	14,726
Previously Estimated Lifecycle Cost of Project (1999 - 2070, 1998 Dollars):	-18,997	Inflation Adjustment (2.7% to convert 1998 to 1999 dollars):			-513
Previously Estimated Lifecycle Cost (1999 - 2070, 1999 Dollars):	-19,510				

### Project Cost Changes

Cost Adjustments    Reconciliation Narratives

Cost Change Due to Scope Deletions (-):

Dataset Name: **FY 1999 Planning Data**

Date of Dataset: **9/20/1999**

Page 4 of 5

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Project Reconciliation

Cost Reductions Due to Efficiencies (-):	
Cost Associated with New Scope (+):	
Cost Growth Associated with Scope Previously Reported (+):	
Cost Reductions Due to Science & Technology Efficiencies (-):	
Subtotal:	-19,510
Additional Amount to Reconcile (+):	97,246
Current Estimated Lifecycle Cost (1999 - 2070, 1999 Dollars):	77,736

Milestones

Milestone/Activity	Field Milestone Code	Original Date	Baseline Date	Legal Date	Forecast Date	Actual Date	EA	DNFSB	Mgmt. Commit.	Key Decision	Intersite
Project Start: FY 1997			10/1/1996								
Project End: FY 2070			9/30/2070								

Milestones - Part II

Milestone/Activity	Field Milestone Code	Critical Decision	Critical Closure Path	Project Start	Project End	Mission Complete	Tech Risk	Work Scope Risk	Intersite Risk	Cancelled	Milestone Description
Project Start: FY 1997				Y							
Project End: FY 2070					Y						